

Anticonvulsant Activity of Tetanus Leaves (*Leeaequata*L.) Ethanolic Extract on Guinea Pig (*Caviacobaya*) Isolated Ileum By *IN VITRO* Method

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Abstract: Tetanus plant (*Leeaequata* L.) is a plant of Leaceae family, which used a traditional medicine in Tanah Karo, North Sumatera province as a cure wounds and antitetanus drugs. One of the major signs of tetanus are muscle spasms or seizures in part of or the entire body. This study aimed to determine the effects of anticonvulsants in the form of a relaxation of the ethanol extract of tetanus leaves against contracting guinea pig ileum isolated induced by acetylcholine chloride.

This study was performed *in vitro* using an *organ bath*. Stages of the research are the preparation of materials and testing separate ileum relaxation effect. The parameters measured in this study are relaxation of isolated ileum smooth muscle. Before testing, guinea pig ileum isolated were equilibrated for 45 minutes to obtain a stable condition in Tyrode solution with a temperature 37° C aerated with karbogen gas (O₂:CO₂) 95%:5%. The tests of relaxing effect of guinea pig ileum isolated is after induced by acetylcholine chloride, then each ileum is given cumulative concentration of ethanol extract of tetanus leaves and atropinesulfate. The concentration of acetylcholine chloride that required to increase the contraction of guinea pig ileum isolated is 1.889 x 10⁻⁴ M. The cumulative concentration of ethanol extract of tetanus leaves that given is 0.5 – 4 mg/ml and cumulative concentration of atropinesulfate given is 6.95 × 10⁻⁶ – 2.08 × 10⁻² mg/ml.

The test results showed that ethanol extract of tetanus leaves has a relaxing effect. Statistical analysis showed that ethanol extract of tetanus leaves at a concentration of 2.5 mg / ml (105.4203 ± 2.9151) has the ability not dissimilar to atropine sulfate 6.95 x 10⁻³ mg/ml (113.9796 ± 4.5825) in reducing the smooth muscle of ileum contraction induced by acetylcholine chloride 1.889 x 10⁻⁴ M (p > 0.005). In conclusion that ethanol extract of tetanus leaves was relaxing effect on the smooth muscle of ileum isolated with the ability not dissimilar to atropine sulfate.

Keywords : tetanus leaves, ileum isolated, guinea pig, relaxation, in vitro.